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WOOD, HERRON & EVANS, L.L.P.
2700 Carew Tower
441 Vine St.
Cincinnati, OH 45202

EXAMINER	
BELL, MELTIN	
ART UNIT	**PAPER NUMBER**
2129	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/021,203	BIGUS ET AL.	
	Examiner	Art Unit	
	Meltin Bell	2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 August 2005 and 21 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-104* is/are pending in the application.

4a) Of the above claim(s) *32,34-56,58-92 and 94-104* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31,33,57 and 93* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/5/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This final action is responsive to application **10/021,203** filed **10/30/2001** as well as the Amendment filed 8/18/05 and the Information Disclosure Statement (IDS) filed 11/21/05. Claims 1-31, 33, 57 and 93 filed by the applicant have been entered and examined. Claims 32, 34-56, 58-92 and 94-104 have been canceled. An action on the merits of claims 1-31, 33, 57 and 93 appears below.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-21, 26-31, 33 and 57 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claims (e.g. agents, agent platforms and product support programs, respectively, configured to perform product support operations, execute on a customer computer and/or dispatch the first product support intelligent agent to the customer computer for execution by the first agent platform) raise a question as to whether the claims are directed to physically transforming an article or physical object to a different state or thing which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. For example, if "remedying said undesirable operational condition using a product support

operation" was appended to claim 1, it will be statutory in most cases since the physical transformation producing the final result achieved by the claimed invention is useful, tangible and concrete.

Claim Rejections - 35 USC § 102

To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Applicant's arguments have been considered, but are moot in view of new grounds of rejection. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 57 is rejected under 35 U.S.C. 102(e) as being anticipated by *Mikurak* United States Patent Number (USPN) 6,671,818 "Problem isolation through translating and filtering events into a standard object format in a network based supply chain" (Filed Nov. 22, 1999).

Regarding claim 57:

Mikurak discloses a method (column 162, lines 17-24) of providing product support (column 77, lines 15-17) for a computer-related product (column 167, lines 60-67, column 168, lines 1-67; column 169, lines 1-20), the method comprising: (a) collecting (column 130, lines 24-67, column 131, lines 1-2) operational data from a plurality of customer computers that utilize the computer-related product during operation of the plurality of customer computers, (b) with at least one computer-implemented (column 9, lines 27-32) intelligent agent (column 220, lines 46-56), analyzing the operational data from the plurality of customer computers and (c) identifying (column 161, lines 27-49) as a result of the analysis an undesirable operational condition (column 89, lines 51-67, column 90, lines 1-45) associated with the computer-related product in at least one of the customer computers.

Claim Rejections - 35 USC § 103

To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Applicant's arguments have been considered, but are moot in view of new grounds of rejection. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the

> subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Office presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Office to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-6, 13-16 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mikurak* in view of *Ly* USPN 6,971,094 "Deployed agent used in the installation and maintenance of software" (Filed Feb. 22, 2000) and in further view of *Maritzen et al* United States Patent Application Number (USPAN) 20020052797 A1 "Customizing a price of a product or a service by using an intelligent agent" (Filed Aug. 15, 2001).

Regarding claim 1:

Mikurak discloses an apparatus (column 162, lines 17-24), comprising: (a) first (column 20, lines 44-64) and second (column 282, lines 62-67, column 283, lines 1-12) product support (column 77, lines 15-17) intelligent agents (column 220, lines 46-56) configured (column 72, lines 18-27) to perform product support operations in connection with a

computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies (column 161, lines 27-49) an undesirable operational condition (column 89, lines 51-67, column 90, lines 1-45) associated with the computer-related product and a product support operation that resolves (column 77, lines 18-26) an undesirable operational condition associated with the computer-related product; (b) a first agent (column 221, lines 14-56) platform configured to execute (column 167, lines 60-67, column 168, lines 1-67; column 169, lines 1-20) on a customer computer that utilizes the computer-related product; and (c) a product support program resident (column 9, lines 27-63, column 15, lines 3-39) on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch to the customer computer (column 30, lines 24-41) and to initiate (column 72, lines 40-42) execution of the second product support intelligent agent (column 264, lines 57-67) by the second agent platform.

However, *Mikurak* doesn't explicitly disclose (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies an undesirable operational condition associated with the computer-related product and (c) a product support

program resident on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform and the product support program configured to dispatch the first product support intelligent agent to the customer computer for execution by the first agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform while *Ly* teaches (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies (column 2, lines 45-52) an undesirable operational condition associated with the computer-related product and *Maritzen et al* teaches (c) a product support program resident on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch (Abstract) the first product support intelligent agent to the customer computer for execution (page 1, [0007]) by the first agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform.

Motivation - The portions of the claimed apparatus would have been a highly desirable feature in this art for maintaining applications on individual computers (*Ly*, column 1, lines 21-28) and customizing a price for a product or a service and purchasing the

product or service by using an intelligent agent (*Maritzen et al*, page 1, [0003]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Mikurak* as taught by *Ly* and *Maritzen et al* for the purpose of maintaining applications on individual computers, customizing a price for a product or a service and purchasing the product or service by using an intelligent agent when automating customer and product support maintenance.

Regarding claim 3:

The rejection of claim 3 is similar to that for claim 1 as recited above since the stated limitations of the claim are set forth in the references. Claim 3's limitation disclosure: the first product support intelligent agent is configured to execute on either of the first or second agent platforms (*Mikurak,* column 15, lines 3-39).

Regarding claim 4:

The rejection of claim 4 is similar to that for claim 1 as recited above since the stated limitations of the claim are set forth in the references. Claim 4's limitation disclosure: the customer computer is the computer-related product (*Mikurak,* column 77, lines 15-17).

Regarding claim 5:

The rejection of claim 5 is similar to that for claim 1 as recited above since the stated limitations of the claim are set forth in the references. Claim 5's limitation disclosure: the computer-related (*Mikurak*: column 193, lines 17-67, column 194, lines 1-60) product (*Mikurak*: column 196, lines 59-67, column 197, lines 1-24) comprises at least one of an internal software component (*Mikurak*: column 192, lines 13-67, column 193,

lines 1-16), an internal hardware component, an external software component and an external hardware component associated with the customer computer

Regarding claim 6:

The rejection of claim 6 is similar to that for claim 1 as recited above since the stated limitations of the claim are set forth in the references. Claim 6's limitation disclosure: each of the first and second product support intelligent agents is configured to perform a product support operation selected from the group consisting of monitoring (Abstract) operational data, collecting operational data, analyzing operational data, identifying an undesirable operational condition (*Mikurak*: column 161, lines 27-49) in the customer computer (*Mikurak*: column 193, lines 17-67, column 194, lines 1-60), selecting another intelligent agent to remedy the undesirable operational condition, creating another intelligent agent to remedy the undesirable operational condition, performing at least one task to remedy the undesirable operational condition, and combinations thereof.

Regarding claim 13:

The rejection of claim 13 is similar to that for claim 1 as recited above since the stated limitations of the claim are set forth in the references. Claim 13's limitation disclosure: the second product support intelligent agent is configured to collect (*Mikurak*: column 130, lines 24-67, column 131, lines 1-2) operational data from the customer computer while resident (*Mikurak*, column 9, lines 27-63) on the product support computer (*Mikurak*: Figs. 2-3, column 15, lines 49-67, column 16, lines 1-24).

Regarding claim 14:

The rejection of claim 14 is similar to that for claim 1 as recited above since the stated limitations of the claim are set forth in the references. Claim 14's limitation disclosure: the customer computer and the product support computer are coupled to one another over the Internet (*Mikurak*: column 77, lines 27-67, column 78, lines 1-2).

Regarding claim 15:

The rejection of claim 15 is similar to that for claim 1 as recited above since the stated limitations of the claim are set forth in the references. Claim 15's limitation disclosure: a cross-customer knowledge base (*Mikurak*: column 249, lines 35-67, column 250, lines 1-6) including operational data associated with a plurality of customers wherein the second product support intelligent agent is configured to analyze (*Mikurak*: column 130, lines 24-67, column 131, lines 1-2) the operational data stored in the cross-customer knowledge base to identify an undesirable operational condition in the computer-related product.

Regarding claim 16:

The rejection of claim 16 is similar to that for claim 15 as recited above since the stated limitations of the claim are set forth in the references. Claim 16's limitation disclosure: the second product support intelligent agent is configured to analyze the operational data using logic (*Mikurak,* column 240, lines 34-53) selected from the group consisting of neural network logic, fuzzy logic, pattern (*Mikurak,* column 239, lines 1-52) matching logic, script logic, and combinations thereof

Regarding claim 31:

Mikurak discloses a program product, comprising: (a) first (column 20, lines 44-64) and second (column 282, lines 62-67, column 283, lines 1-12) product support (column 77, lines 15-17) intelligent agents (column 220, lines 46-56) configured (column 72, lines 18-27) to perform product support operations in connection with a computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies (column 161, lines 27-49) an undesirable operational condition (column 89, lines 51-67, column 90, lines 1-45) associated with the computer-related product and a product support operation that resolves (column 77, lines 18-26) an undesirable operational condition associated with the computer-related product; (b) a first agent (column 221, lines 14-56) platform configured to execute (column 167, lines 60-67, column 168, lines 1-67; column 169, lines 1-20) on a customer computer that utilizes the computer-related product; (c) a product support program configured to reside (column 9, lines 27-63, column 15, lines 3-39) on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch to the customer computer (column 30, lines 24-41) and to initiate (column 72, lines 40-42) execution of the second product support intelligent agent (column 264, lines 57-67) by the second agent platform; and (d) at least one tangible (column 218, lines 5-19) computer-readable medium bearing the first and second product support agents, the first agent platform, and the product support program (column 25, lines 9-25).

However, *Mikurak* doesn't explicitly disclose (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies an undesirable operational condition associated with the computer-related product and (c) a product support program configured to reside on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch the first product support intelligent agent to the customer computer for execution by the first agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform while *Ly* teaches (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies (column 2, lines 45-52) an undesirable operational condition associated with the computer-related product and *Maritzen et al* teaches (c) a product support program configured to reside on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support

program configured to dispatch (Abstract) the first product support intelligent agent to the customer computer for execution (page 1, [0007]) by the first agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform.

Motivation - The portions of the claimed product would have been a highly desirable feature in this art for maintaining applications on individual computers (*Ly*, column 1, lines 21-28) and customizing a price for a product or a service and purchasing the product or service by using an intelligent agent (*Maritzen et al*, page 1, [0003]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Mikurak* as taught by *Ly* and *Maritzen et al* for the purpose of maintaining applications on individual computers, customizing a price for a product or a service and purchasing the product or service by using an intelligent agent when automating customer and product support maintenance.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Mikurak* in view of *Ly* in view of *Maritzen et al* and in further view of *Gomi et al* USPN 6,754,691 "Distributed system, access control process and apparatus and program product having access controlling program thereon" (Filed Jun. 2, 2000).

Regarding claim 2:

Mikurak discloses an apparatus (column 162, lines 17-24), comprising: (a) first (column 20, lines 44-64) and second (column 282, lines 62-67, column 283, lines 1-12) product support (column 77, lines 15-17) intelligent agents (column 220, lines 46-56) configured

(column 72, lines 18-27) to perform product support operations in connection with a computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies (column 161, lines 27-49) an undesirable operational condition (column 89, lines 51-67, column 90, lines 1-45) associated with the computer-related product and a product support operation that resolves (column 77, lines 18-26) an undesirable operational condition associated with the computer-related product; (b) a first agent (column 221, lines 14-56) platform configured to execute (column 167, lines 60-67, column 168, lines 1-67; column 169, lines 1-20) on a customer computer that utilizes the computer-related product; and (c) a product support program resident (column 9, lines 27-63, column 15, lines 3-39) on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch to the customer computer (column 30, lines 24-41) and to initiate (column 72, lines 40-42) execution of the second product support intelligent agent (column 264, lines 57-67) by the second agent platform.

However, *Mikurak* doesn't explicitly disclose (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies an undesirable operational

condition associated with the computer-related product, (c) a product support program resident on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform and the product support program configured to dispatch the first product support intelligent agent to the customer computer for execution by the first agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform and the first and second product support agents are configured to communicate with one another while *Ly* teaches (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies (column 2, lines 45-52) an undesirable operational condition associated with the computer-related product, *Maritzen et al* teaches (c) a product support program resident on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch (Abstract) the first product support intelligent agent to the customer computer for execution (page 1, [0007]) by the first agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform and *Gomi et al* teaches the first and second product support agents are configured to communicate with one another (column 2, lines 42-49)

Motivation - The portions of the claimed apparatus would have been a highly desirable feature in this art for maintaining applications on individual computers (*Ly*, column 1, lines 21-28), customizing a price for a product or a service and purchasing the product or service by using an intelligent agent (*Maritzen et al*, page 1, [0003]) and executing one or more agents each having method executing means and for managing execution of the agents, wherein the agent is migrated from a first agent environment where the agent operates to a second agent environment in which the agent is restored to continue the execution (*Gomi et al*, column 8, lines 44-51). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Mikurak* as taught by *Ly, Maritzen et al* and *Gomi et al* for the purpose of maintaining applications on individual computers as well as customizing a price for a product or a service, purchasing the product or service by using an intelligent agent and executing one or more agents when controlling the automation of customer and product support maintenance.

Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mikurak* in view of *Ly* in view of *Maritzen et al* and in further view of *Chen et al* USPN 6,021,437 "Process and system for real-time monitoring of a data processing system for its administration and maintenance support in the operating phase" (Feb. 1, 2000).

Regarding claim 7:

Mikurak discloses an apparatus (column 162, lines 17-24), comprising: (a) first (column 20, lines 44-64) and second (column 282, lines 62-67, column 283, lines 1-12) product

support (column 77, lines 15-17) intelligent agents (column 220, lines 46-56) configured (column 72, lines 18-27) to perform product support operations in connection with a computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies (column 161, lines 27-49) an undesirable operational condition (column 89, lines 51-67, column 90, lines 1-45) associated with the computer-related product and a product support operation that resolves (column 77, lines 18-26) an undesirable operational condition associated with the computer-related product; (b) a first agent (column 221, lines 14-56) platform configured to execute (column 167, lines 60-67, column 168, lines 1-67; column 169, lines 1-20) on a customer computer that utilizes the computer-related product; and (c) a product support program resident (column 9, lines 27-63, column 15, lines 3-39) on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch to the customer computer (column 30, lines 24-41) and to initiate (column 72, lines 40-42) execution of the second product support intelligent agent (column 264, lines 57-67) by the second agent platform.

However, *Mikurak* doesn't explicitly disclose (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related

product and a product support operation that remedies an undesirable operational condition associated with the computer-related product, (c) a product support program resident on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform and the product support program configured to dispatch the first product support intelligent agent to the customer computer for execution by the first agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform and the first product support intelligent agent is configured to collect operational data associated with the computer-related product, and wherein the second product support intelligent agent is configured to analyze the operational data collected by the first product support intelligent agent to identify an undesirable operational condition for the computer-related product while *Ly* teaches (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies (column 2, lines 45-52) an undesirable operational condition associated with the computer-related product, *Maritzen et al* teaches (c) a product support program resident on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch (Abstract) the first

product support intelligent agent to the customer computer for execution (page 1, [0007]) by the first agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform and *Chen et al* teaches the first product support intelligent agent is configured to collect (column 8, lines 58-67; column 9, lines 1-13) operational data associated with the computer-related product, and wherein the second product support intelligent agent is configured to analyze (column 7, lines 17-65) the operational data collected by the first product support intelligent agent to identify an undesirable operational condition for the computer-related product. Motivation - The portions of the claimed apparatus would have been a highly desirable feature in this art for maintaining applications on individual computers (*Ly*, column 1, lines 21-28), customizing a price for a product or a service and purchasing the product or service by using an intelligent agent (*Maritzen et al*, page 1, [0003]) and providing significant information for a proper diagnosis (*Chen et al*: column 12, lines 41-67, column 13, lines 1-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Mikurak* as taught by *Ly, Maritzen et al* and *Chen et al* for the purpose of maintaining applications on individual computers as well as customizing a price for a product or a service, purchasing the product or service by using an intelligent agent and providing significant information for a proper diagnosis when automating customer and product support maintenance.

Regarding claim 8:

The rejection of claim 8 is similar to that for claim 7 as recited above since the stated limitations of the claim are set forth in the references. Claim 8's limitation disclosure:

the product support program is further configured to dispatch a remedy (*Ly,* column 2, lines 45-52) intelligent agent to remedy the undesirable operational condition.

Regarding claim 9:

The rejection of claim 9 is similar to that for claim 8 as recited above since the stated limitations of the claim are set forth in the references. Claim 9's limitation disclosure: the product support program is further configured to create (*Mikurak,* column 221, lines 14-56) the remedy intelligent agent.

Regarding claim 10:

The rejection of claim 10 is similar to that for claim 9 as recited above since the stated limitations of the claim are set forth in the references. Claim 10's limitation disclosure: the product support program is further configured to publish (*Mikurak*: column 167, lines 60-67, column 168, lines 1-67; column 169, lines 1-20) the remedy intelligent agent with a distribution control (*Mikurak*: column 133, lines 57-67, column 134, lines 1-44) that limits distribution of the remedy intelligent agent (*Mikurak*, column 166, lines 30-43).

Regarding claim 11:

The rejection of claim 11 is similar to that for claim 8 as recited above since the stated limitations of the claim are set forth in the references. Claim 11's limitation disclosure: the product support program is further configured to select (*Mikurak*: column 89, lines 51-67, column 90, lines 1-45) the intelligent agent from among a plurality of existing agents.

Regarding claim 12:

The rejection of claim 12 is similar to that for claim 8 as recited above since the stated limitations of the claim are set forth in the references. Claim 12's limitation disclosure: the product support program is configured to dispatch the remedy intelligent agent between product releases of the computer-related product (*Mikurak,* column 185, lines 27-39)

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Mikurak* in view of *Ly* in view of *Maritzen et al* and in further view of *Cheng et al* USPN 6,151,643 "Automatic updating of diverse software products on multiple client computer systems by downloading scanning application to client computer and generating software list on client computer" (Nov. 21, 2000).

Regarding claim 17:

Mikurak discloses an apparatus (column 162, lines 17-24), comprising: (a) first (column 20, lines 44-64) and second (column 282, lines 62-67, column 283, lines 1-12) product support (column 77, lines 15-17) intelligent agents (column 220, lines 46-56) configured (column 72, lines 18-27) to perform product support operations in connection with a computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies (column 161, lines 27-49) an undesirable operational condition (column 89, lines 51-67, column 90, lines 1-45) associated with the computer-related product and a product support operation that resolves (column 77, lines 18-26) an undesirable

operational condition associated with the computer-related product; (b) a first agent (column 221, lines 14-56) platform configured to execute (column 167, lines 60-67, column 168, lines 1-67; column 169, lines 1-20) on a customer computer that utilizes the computer-related product; and (c) a product support program resident (column 9, lines 27-63, column 15, lines 3-39) on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch to the customer computer (column 30, lines 24-41) and to initiate (column 72, lines 40-42) execution of the second product support intelligent agent (column 264, lines 57-67) by the second agent platform.

However, *Mikurak* doesn't explicitly disclose (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies an undesirable operational condition associated with the computer-related product (c) a product support program resident on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform and the product support program configured to dispatch the first product support intelligent agent to the customer computer for execution by the first agent platform, and to initiate execution of the second product support intelligent agent by the

second agent platform and the first and second product support intelligent agents are associated with different vendors while *Ly* teaches (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies (column 2, lines 45-52) an undesirable operational condition associated with the computer-related product, *Maritzen et al* teaches (c) a product support program resident on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch (Abstract) the first product support intelligent agent to the customer computer for execution (page 1, [0007]) by the first agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform and *Cheng et al* teaches the first and second product support intelligent agents are associated with different vendors (Abstract).

Motivation - The portions of the claimed apparatus would have been a highly desirable feature in this art for maintaining applications on individual computers (*Ly*, column 1, lines 21-28), customizing a price for a product or a service and purchasing the product or service by using an intelligent agent (*Maritzen et al*, page 1, [0003]) and automatically updating software products from diverse software vendors on a plurality of end-user, client computer systems (*Cheng et al*, column 1, lines 10-15). Therefore, it would have

been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Mikurak* as taught by *Ly, Maritzen et al* and *Cheng et al* for the purpose of maintaining applications on individual computers as well as customizing a price for a product or a service, purchasing the product or service by using an intelligent agent and automatically updating software products from diverse software vendors on a plurality of end-user, client computer systems when automating customer and product support maintenance.

Claims 18, 20 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mikurak* in view of *Maritzen et al* and in further view of *Ly*.

Regarding claim 18:

Mikurak discloses a method (column 162, lines 17-24) of providing product support (column 77, lines 15-17) for a computer-related product, the method comprising: (a) dispatching to a customer computer (column 30, lines 24-41) and (b) a computer implemented (column 11, lines 19-27, column 162, lines 25-34) step of executing (column 167, lines 60-67, column 168, lines 1-67; column 169, lines 1-20) a second (column 282, lines 62-67, column 283, lines 1-12) product support intelligent agent (column 220, lines 46-56) on a second agent platform resident (column 9, lines 27-63, column 15, lines 3-39) on the product support computer to perform a second product support operation associated with the computer-related product, wherein at least one of the first (column 20, lines 44-64) and second product support intelligent agents is configured (column 72, lines 18-27) to perform at least one of a product support

operation that identifies (column 161, lines 27-49) an undesirable operational condition (column 89, lines 51-67, column 90, lines 1-45) associated with the computer-related product and a product support operation that resolves (column 77, lines 18-26) an undesirable operational condition associated with the computer-related product. However, *Mikurak* doesn't explicitly disclose (a) dispatching a first product support intelligent agent from a product support computer to a customer computer to execute on a first agent platform resident on the customer computer to perform a first product support operation associated with the computer-related product and (b) a computer implemented step of executing a second product support intelligent agent on a second agent platform resident on the product support computer to perform a second product support operation associated with the computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies an undesirable operational condition associated with the computer-related product while *Maritzen et al* teaches (a) dispatching a (Abstract) first product support intelligent agent from a product support computer to a customer computer to execute (page 1, [0007]) on a first agent platform resident on the customer computer to perform a first product support operation associated with the computer-related product and *Ly* teaches (b) a computer implemented step of executing a second product support intelligent agent on a second agent platform resident on the product support computer to perform a second product support operation associated with the computer-related

product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies (column 2, lines 45-52) an undesirable operational condition associated with the computer-related product.

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for maintaining applications on individual computers (*Ly*, column 1, lines 21-28) and customizing a price for a product or a service and purchasing the product or service by using an intelligent agent (*Maritzen et al*, page 1, [0003]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Mikurak* as taught by *Ly* and *Maritzen et al* for the purpose of maintaining applications on individual computers, customizing a price for a product or a service and purchasing the product or service by using an intelligent agent when automating customer and product support maintenance.

Regarding claim 20:

The rejection of claim 20 is similar to that for claim 18 as recited above since the stated limitations of the claim are set forth in the references. Claim 20's limitation disclosure: each of the first and second product support operations are selected from the group consisting of monitoring operational data, collecting operational data, analyzing operational data, identifying an undesirable operational condition (*Mikurak*: column 161, lines 27-49) in the customer computer (*Mikurak*: column 193, lines 17-67, column 194, lines 1-60, selecting another intelligent agent to remedy the undesirable operational

condition, creating another intelligent agent to remedy the undesirable operational condition, performing at least one task to remedy the undesirable operational condition, and combinations thereof.

Regarding claim 26:

The rejection of claim 26 is similar to that for claim 18 as recited above since the stated limitations of the claim are set forth in the references. Claim 26's limitation disclosure: the second product support intelligent agent is configured to collect (*Mikurak*: column 130, lines 24-67, column 131, lines 1-2) operational data from the customer computer while resident (*Mikurak*, column 9, lines 27-63) on the product support computer (*Mikurak*: Figs. 2-3, column 15, lines 49-67, column 16, lines 1-24).

Regarding claim 27:

The rejection of claim 27 is similar to that for claim 18 as recited above since the stated limitations of the claim are set forth in the references. Claim 27's limitation disclosure: the customer computer and the product support computer are coupled to one another over the Internet (*Mikurak*: column 77, lines 27-67, column 78, lines 1-2).

Regarding claim 28:

The rejection of claim 28 is similar to that for claim 18 as recited above since the stated limitations of the claim are set forth in the references. Claim 28's limitation disclosure: the second product support intelligent agent is configured to analyze (*Mikurak*: column 130, lines 24-67, column 131, lines 1-2) operational data stored in a cross-customer knowledge base (*Mikurak*: column 249, lines 35-67, column 250, lines 1-6) to identify an undesirable operational condition in the computer-related product.

Regarding claim 29:

The rejection of claim 29 is similar to that for claim 28 as recited above since the stated limitations of the claim are set forth in the references. Claim 29's limitation disclosure: the second product support intelligent agent is configured to analyze the operational data using logic (*Mikurak,* column 240, lines 34-53) selected from the group consisting of neural network logic, fuzzy logic, pattern (*Mikurak,* column 239, lines 1-52) matching logic, script logic, and combinations thereof.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Mikurak* in view of *Maritzen et al* in view of *Ly* and in further view of *Gomi et al.*

Regarding claim 19:

Mikurak discloses a method (column 162, lines 17-24) of providing product support (column 77, lines 15-17) for a computer-related product, the method comprising: (a) dispatching to a customer computer (column 30, lines 24-41) and (b) a computer implemented (column 11, lines 19-27, column 162, lines 25-34) step of executing (column 167, lines 60-67, column 168, lines 1-67; column 169, lines 1-20) a second (column 282, lines 62-67, column 283, lines 1-12) product support intelligent agent (column 220, lines 46-56) on a second agent platform resident (column 9, lines 27-63, column 15, lines 3-39) on the product support computer to perform a second product support operation associated with the computer-related product, wherein at least one of the first (column 20, lines 44-64) and second product support intelligent agents is configured (column 72, lines 18-27) to perform at least one of a product support

operation that identifies (column 161, lines 27-49) an undesirable operational condition (column 89, lines 51-67, column 90, lines 1-45) associated with the computer-related product and a product support operation that resolves (column 77, lines 18-26) an undesirable operational condition associated with the computer-related product. However, *Mikurak* doesn't explicitly disclose (a) dispatching a first product support intelligent agent from a product support computer to a customer computer to execute on a first agent platform resident on the customer computer to perform a first product support operation associated with the computer-related product, (b) a computer implemented step of executing a second product support intelligent agent on a second agent platform resident on the product support computer to perform a second product support operation associated with the computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies an undesirable operational condition associated with the computer-related product and the first and second product support agents are configured to communicate with one another when performing the first and second product support operations while *Maritzen et al* teaches (a) dispatching a (Abstract) first product support intelligent agent from a product support computer to a customer computer to execute (page 1, [0007]) on a first agent platform resident on the customer computer to perform a first product support operation associated with the computer-related product, *Ly* teaches (b) a computer implemented step of executing a second product support intelligent agent on

a second agent platform resident on the product support computer to perform a second product support operation associated with the computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies (column 2, lines 45-52) an undesirable operational condition associated with the computer-related product and *Gomi et al* teaches the first and second product support agents are configured to communicate with one another (column 2, lines 42-49) when performing the first and second product support operations.

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for maintaining applications on individual computers (*Ly*, column 1, lines 21-28), customizing a price for a product or a service and purchasing the product or service by using an intelligent agent (*Maritzen et al*, page 1, [0003]) and executing one or more agents each having method executing means and for managing execution of the agents, wherein the agent is migrated from a first agent environment where the agent operates to a second agent environment in which the agent is restored to continue the execution (*Gomi et al*, column 8, lines 44-51). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Mikurak* as taught by *Ly, Maritzen et al* and *Gomi et al* for the purpose of maintaining applications on individual computers as well as customizing a price for a product or a service, purchasing the product or service by using an intelligent agent and

executing one or more agents when controlling the automation of customer and product support maintenance.

Claims 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mikurak* in view of *Maritzen et al* in view of *Ly* and in further view of *Chen et al.*

Regarding claim 21:

Mikurak discloses a method (column 162, lines 17-24) of providing product support (column 77, lines 15-17) for a computer-related product, the method comprising: (a) dispatching to a customer computer (column 30, lines 24-41) and (b) a computer implemented (column 11, lines 19-27, column 162, lines 25-34) step of executing (column 167, lines 60-67, column 168, lines 1-67; column 169, lines 1-20) a second (column 282, lines 62-67, column 283, lines 1-12) product support intelligent agent (column 220, lines 46-56) on a second agent platform resident (column 9, lines 27-63, column 15, lines 3-39) on the product support computer to perform a second product support operation associated with the computer-related product, wherein at least one of the first (column 20, lines 44-64) and second product support intelligent agents is configured (column 72, lines 18-27) to perform at least one of a product support operation that identifies (column 161, lines 27-49) an undesirable operational condition (column 89, lines 51-67, column 90, lines 1-45) associated with the computer-related product and a product support operation that resolves (column 77, lines 18-26) an undesirable operational condition associated with the computer-related product.

However, *Mikurak* doesn't explicitly disclose (a) dispatching a first product support intelligent agent from a product support computer to a customer computer to execute on a first agent platform resident on the customer computer to perform a first product support operation associated with the computer-related product and (b) a computer implemented step of executing a second product support intelligent agent on a second agent platform resident on the product support computer to perform a second product support operation associated with the computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies an undesirable operational condition associated with the computer-related product while *Maritzen et al* teaches (a) dispatching a (Abstract) first product support intelligent agent from a product support computer to a customer computer to execute (page 1, [0007]) on a first agent platform resident on the customer computer to perform a first product support operation associated with the computer-related product, *Ly* teaches (b) a computer implemented step of executing a second product support intelligent agent on a second agent platform resident on the product support computer to perform a second product support operation associated with the computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies (column 2, lines 45-52) an undesirable

operational condition associated with the computer-related product and *Chen et al* teaches the first product support intelligent agent is configured to collect (column 8, lines 58-67; column 9, lines 1-13) operational data associated with the computer-related product, and wherein the second product support intelligent agent is configured to analyze (column 7, lines 17-65) the operational data collected by the first product support intelligent agent to identify an undesirable operational condition for the computer-related product.

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for maintaining applications on individual computers (*Ly*, column 1, lines 21-28), customizing a price for a product or a service and purchasing the product or service by using an intelligent agent (*Maritzen et al*, page 1, [0003]) and providing significant information for a proper diagnosis (*Chen et al*: column 12, lines 41-67, column 13, lines 1-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Mikurak* as taught by *Ly, Maritzen et al* and *Chen et al* for the purpose of maintaining applications on individual computers as well as customizing a price for a product or a service, purchasing the product or service by using an intelligent agent and providing significant information for a proper diagnosis when automating customer and product support maintenance.

Regarding claim 22:

The rejection of claim 22 is similar to that for claim 21 as recited above since the stated limitations of the claim are set forth in the references. Claim 22's limitation disclosure: dispatching a remedy (*Ly,* column 2, lines 45-52) intelligent agent to at least one of the

customer computer and the product support computer to remedy the undesirable operational condition.

Regarding claim 23:

The rejection of claim 23 is similar to that for claim 22 as recited above since the stated limitations of the claim are set forth in the references. Claim 23's limitation disclosure: creating (*Mikurak,* column 221, lines 14-56) the remedy intelligent agent.

Regarding claim 24:

The rejection of claim 24 is similar to that for claim 23 as recited above since the stated limitations of the claim are set forth in the references. Claim 24's limitation disclosure: publishing (*Mikurak*: column 167, lines 60-67, column 168, lines 1-67; column 169, lines 1-20) the remedy intelligent agent with a distribution control (*Mikurak*: column 133, lines 57-67, column 134, lines 1-44) that limits distribution of the remedy intelligent agent (*Mikurak*, column 166, lines 30-43).

Regarding claim 25:

The rejection of claim 25 is similar to that for claim 22 as recited above since the stated limitations of the claim are set forth in the references. Claim 25's limitation disclosure: dispatching the remedy intelligent agent occurs between product releases of the computer-related product (*Mikurak,* column 185, lines 27-39).

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Mikurak* in view of *Maritzen et al* in view of *Ly* and in further view of *Cheng et al.*

Regarding claim 30:

Mikurak discloses a method (column 162, lines 17-24) of providing product support (column 77, lines 15-17) for a computer-related product, the method comprising: (a) dispatching to a customer computer (column 30, lines 24-41) and (b) a computer implemented (column 11, lines 19-27, column 162, lines 25-34) step of executing (column 167, lines 60-67, column 168, lines 1-67; column 169, lines 1-20) a second (column 282, lines 62-67, column 283, lines 1-12) product support intelligent agent (column 220, lines 46-56) on a second agent platform resident (column 9, lines 27-63, column 15, lines 3-39) on the product support computer to perform a second product support operation associated with the computer-related product, wherein at least one of the first (column 20, lines 44-64) and second product support intelligent agents is configured (column 72, lines 18-27) to perform at least one of a product support operation that identifies (column 161, lines 27-49) an undesirable operational condition (column 89, lines 51-67, column 90, lines 1-45) associated with the computer-related product and a product support operation that resolves (column 77, lines 18-26) an undesirable operational condition associated with the computer-related product. However, *Mikurak* doesn't explicitly disclose (a) dispatching a first product support intelligent agent from a product support computer to a customer computer to execute on a first agent platform resident on the customer computer to perform a first product support operation associated with the computer-related product, (b) a computer implemented step of executing a second product support intelligent agent on a second agent platform resident on the product support computer to perform a second product

support operation associated with the computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies an undesirable operational condition associated with the computer-related product and the first and second product support intelligent agents are associated with different vendors while *Maritzen et al* teaches (a) dispatching a (Abstract) first product support intelligent agent from a product support computer to a customer computer to execute (page 1, [0007]) on a first agent platform resident on the customer computer to perform a first product support operation associated with the computer-related product, *Ly* teaches (b) a computer implemented step of executing a second product support intelligent agent on a second agent platform resident on the product support computer to perform a second product support operation associated with the computer-related product, wherein at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies (column 2, lines 45-52) an undesirable operational condition associated with the computer-related product and *Cheng et al* teaches the first and second product support intelligent agents are associated with different vendors (Abstract).

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for maintaining applications on individual computers (*Ly*, column 1,

lines 21-28), customizing a price for a product or a service and purchasing the product or service by using an intelligent agent (*Maritzen et al*, page 1, [0003]) and automatically updating software products from diverse software vendors on a plurality of end-user, client computer systems (*Cheng et al*, column 1, lines 10-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Mikurak* as taught by *Ly, Maritzen et al* and *Cheng et al* for the purpose of maintaining applications on individual computers as well as customizing a price for a product or a service, purchasing the product or service by using an intelligent agent and automatically updating software products from diverse software vendors on a plurality of end-user, client computer systems when automating customer and product support maintenance.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Mikurak* in view of *Ly*.

Regarding claim 33:

Mikurak discloses a method (column 162, lines 17-24) of providing product support (column 77, lines 15-17) for a computer-related product (column 9, lines 27-32), the method comprising: (a) collecting (column 130, lines 24-67, column 131, lines 1-2) operational data from a plurality of customer computers that utilize the computer-related product during operation of the plurality of customer computers, (b) identifying (column 161, lines 27-49) an undesirable operational condition associated with the computer-related product from the collected operational data, wherein the identified

undesirable operational condition includes a technical problem (column 269, lines 51-67) resulting in at least one of incorrect (column 35, lines 32-41) and non-optimal operation of at least one customer computer, (c) creating (column 221, lines 14-56) a product support intelligent agent configured to resolve (column 77, lines 18-26) the undesirable operational condition and at least one of collecting operational data, identifying the undesirable condition, creating the product support intelligent agent and distributing the product support intelligent agent is computer-implemented However, *Mikurak* doesn't explicitly disclose (c) creating a product support intelligent agent configured to remedy the undesirable operational condition and (d) distributing the product support intelligent agent to at least first and second customer computers from the plurality of customer computers to remedy the undesirable operational condition in the first and second customer computers, wherein at least one of collecting operational data, identifying the undesirable condition, creating the product support intelligent agent and distributing the product support intelligent agent is computer-implemented while *Ly* teaches (c) creating a product support intelligent agent configured to remedy (column 2, lines 45-52) the undesirable operational condition and (d) distributing (column 2, lines 14-21) the product support intelligent agent to at least first and second customer computers from the plurality of customer computers to remedy the undesirable operational condition in the first and second customer computers, wherein at least one of collecting operational data, identifying the undesirable condition, creating the product support intelligent agent and distributing the product support intelligent agent is computer-implemented.

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for maintaining applications on individual computers (*Ly*, column 1, lines 21-28). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Mikurak* as taught by *Ly* for the purpose of maintaining applications on individual computers when providing software product support maintenance.

Claim 93 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Mikurak* in view of *Ly* and in further view of *Cheng et al.*

Regarding claim 93:

Mikurak teaches a computer-implemented (column 9, lines 27-32) method (column 162, lines 17-24) of providing product support (column 77, lines 15-17) for a computer-related product, the method comprising: (a) executing (column 167, lines 60-67, column 168, lines 1-67; column 169, lines 1-20) a first (column 20, lines 44-64) intelligent agent (column 220, lines 46-56) to perform a first task (*Mikurak*: column 192, lines 13-67, column 193, lines 1-16) associated with resolving (column 77, lines 18-26) an undesirable operational condition (column 89, lines 51-67, column 90, lines 1-45) associated with a customer computer that utilizes the computer-related product,; and (b) executing a second (column 282, lines 62-67, column 283, lines 1-12) intelligent agent to perform a second task associated with resolving the undesirable operational condition.

However, *Mikurak* doesn't explicitly disclose (a) executing a first intelligent agent to perform a first task associated with remedying an undesirable operational condition associated with a customer computer that utilizes the computer-related product, wherein the first intelligent agent is provided by a first vendor that supplies a first component associated with the computer-related product; and (b) executing a second intelligent agent to perform a second task associated with remedying the undesirable operational condition, wherein the second intelligent agent is provided by a second vendor that supplies a second component associated with the computer-related product while *Ly* teaches (a) executing a first intelligent agent to perform a first task associated with remedying (column 2, lines 45-52) an undesirable operational condition associated with a customer computer that utilizes the computer-related product, wherein the first intelligent agent is provided by a first vendor that supplies a first component associated with the computer-related product; and (b) executing a second intelligent agent to perform a second task (column 4, lines 1-29) associated with remedying the undesirable operational condition, wherein the second intelligent agent is provided by a second vendor that supplies a second component associated with the computer-related product and *Cheng et al* teaches (a) executing a first intelligent agent to perform a first task associated with remedying an undesirable operational condition associated with a customer computer that utilizes the computer-related product, wherein the first intelligent agent is provided by a first vendor that supplies a first component associated with the computer-related product (column 2, lines 62-67, column 3, lines 1-12); and (b) executing a second intelligent agent to perform a second task associated with

remedying the undesirable operational condition, wherein the second intelligent agent is provided by a second vendor that supplies a second component associated with the computer-related product (column 10, lines 13-24).

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for maintaining applications on individual computers (*Ly*, column 1, lines 21-28) and automatically updating software products from diverse software vendors on a plurality of end-user, client computer systems (*Cheng et al*, column 1, lines 10-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify *Mikurak* as taught by *Ly* and *Cheng et al* for the purpose of maintaining applications on individual computers as well as automatically updating software products from diverse software vendors on a plurality of end-user, client computer systems when automating customer and product support maintenance.

Specification

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is required in correcting any errors of which applicant may become aware in the specification.

The disclosure is objected to because of the following informalities:

- 'magnetic tape, optical disks (e.g., CD-ROM's, DVD's, etc.), among others, and transmission type media such as digital and analog communication links' on page 15, lines 1-2 would read well as 'magnetic tape and optical disks (e.g., CD-ROM's, DVD's, etc.)'.

- 'U.S. Patent Applications 08/826,107, 08/822,933, filed on March 21, 1997 and' on page 23, lines 3-4 would read well as 'United States Patent Number 6,192,354 and U.S. Patent Application 08/822,993, both filed on March 21, 1997 and U.S. Patent Application'.

Appropriate correction is required.

RESPONSE TO APPLICANTS' AMENDMENT REMARKS

Applicant argues that no new matter was added in the amendments of claims 31 and 57 (Amendment REMARKS page 11, paragraph 3).

Claim Rejections - 35 USC § 101

Applicant argues that the amendment to claim 31 warrants withdrawal of the 35 USC 101 rejection of claims 31-32 (Amendment REMARKS page 11, paragraph 4) and that at least one computer-implemented step of claims 33 and 57 render them statutory (Amendment REMARKS page 11, last paragraph and page 12, paragraphs 1-2). Applicant's arguments have been fully considered, but are moot in view of new grounds of rejection: The language of claims 1-21, 26-31, 33 and 57 (e.g. agents, agent platforms and product support programs, respectively, configured to perform product support operations, execute on a customer computer and/or dispatch the first product support intelligent agent to the customer computer for execution by the first agent platform) raise a question as to whether the claims are directed to physically

transforming an article or physical object to a different state or thing which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. The examiner recommends amending the final result of the claims to remedying said undesirable operational condition using a product support operation.

Claim Rejections - 35 USC §103

Applicant argues that *Chefalas et al* United States Patent Number (USPN) 6,785,834 is not properly citable against the present application in an obviousness rejection of claims 1-33, 57 and 93 pursuant to 35 USC 103(c) which excludes any commonly-owned reference that is only citable against an application under 35 USC 102(e), (f) or (g) (Amendment REMARKS page 13, paragraph 1). Applicant's arguments have been fully considered, but are moot in view of new grounds of rejection.

The examiner agrees that *Chefalas et al* meets the requirements of 35 USC 103(c). For examples of relevant disclosure(s) explicitly and inherently teaching the invention of claims 1-31, 33, 57 and 93, however, *Mikurak* USPN 6,671,818 column 77, lines 15-17 (product support), *Ly* USPN 6,971,094 column 2, lines 45-52 (remedying undesirable operation conditions), *Maritzen et al* United States Patent Application Number (USPAN) 20020052797 Abstract (dispatching an agent), *Gomi et al* USPN 6,754,691 column 2, lines 42-49 (agents communicating with each other), *Chen et al* USPN 6,021,437 column 7, lines 17-65 (an agent that analyzes undesirable operational

data collected by another agent) and *Cheng et al* USPN 6,151,643 Abstract (agents associated with different vendors) are cited.

Furthermore, the purpose and motivation for modifying *Mikurak* as taught by other references includes maintaining applications on individual computers (*Ly*, column 1, lines 21-28), customizing a price for a product or a service and purchasing the product or service by using an intelligent agent (*Maritzen et al*, page 1, [0003]), executing one or more agents each having method executing means and for managing execution of the agents, wherein the agent is migrated from a first agent environment where the agent operates to a second agent environment in which the agent is restored to continue the execution (*Gomi et al*, column 8, lines 44-51), providing significant information for a proper diagnosis (*Chen et al*: column 12, lines 41-67, column 13, lines 1-15) and automatically updating software products from diverse software vendors on a plurality of end-user, client computer systems (*Cheng et al*, column 1, lines 10-15) when controlling the automation of customer and product support maintenance.

As set forth above with regards to *Mikurak, Ly, Maritzen et al, Gomi et al, Chen et al* and *Cheng et al* the items listed explicitly and inherently teach each element of the applicants' claimed limitations. Applicants have not set forth any distinction or offered any dispute between the claims of the subject application, *Mikurak*'s Problem isolation through translating and filtering events into a standard object format in a network based supply chain, *Ly*'s Deployed agent used in the installation and maintenance of software, *Maritzen et al*'s Customizing a price of a product or a service by using an intelligent agent, *Gomi et al*'s Distributed system, access control process and apparatus and

program product having access controlling program thereon, *Chen et al* Process and system for real-time monitoring of a data processing system for its administration and maintenance support in the operating phase and *Cheng et al*'s Automatic updating of diverse software products on multiple client computer systems by downloading scanning application to client computer and generating software list on client computer.

Conclusion

The following prior art made of record is considered pertinent to applicant's disclosure:

- *Aronberg et al;* US 6117188 A; System and method using token processing to control software distribution and desktop management in a computer network environment
- *Bennett et al;* US 6490574 B1; Method and system for managing rules and events in a multi-user intelligent agent environment
- *Bigus et al;* US 20040205034 A1; Communication between intelligent agents and humans in a distributed system environment
- *Borchers et al;* US 6108616 A; Process diagnosis system and method for the diagnosis of processes and states in an technical process
- *Buckle et al;* US 6049819 A; Communications network incorporating agent oriented computing environment
- *Castro; US 20020091991 A1; Unified real-time microprocessor computer*
- *Cheyer et al;* US 6851115 B1; Software-based architecture for communication and cooperation among distributed electronic agents

- *Clancey et al;* US 6216098 B1; Simulating work behavior

- *Dattatri;* US 6658453 B1; Server agent system

- *Douik et al;* US 6012152 A; Software fault management system

- *Fawcett et al;* US 5678002 A; System and method for providing automated customer support

- *Gladden;* US 5765028 A; Method and apparatus for providing neural intelligence to a mail query agent in an online analytical processing system

- *Goldsmith;* US 6754643 B1; Adaptive method with intercessory feedback control for an intelligent agent

- *Johnson et al;* US 5987135 A; System and method for controlling and monitoring remote distributed processing system

- *Kanevsky;* US 6988279 B1; Intelligent agent authentication via position locator system

- *Kiss et al;* US 6484155 B1; Knowledge management system for performing dynamic distributed problem solving

- *Kohn et al;* US 5963447 A; Multiple-agent hybrid control architecture for intelligent real-time control of distributed nonlinear processes

- *Lagarde et al;* US 5745754 A; Sub-agent for fulfilling requests of a web browser using an intelligent agent and providing a report

- *Lark et al;* US 4943932 A; Architecture for composing computational modules uniformly across diverse developmental frameworks

- *Matsunami et al;* US 6775830 B1; Computer system and a program install method thereof

- *Naillon;* US 6442438 B1; Method for controlling a decisional process when pursuing an aim in a specific field of application, such as economical, technical, organizational or similar and system for implementing the method

- *Pandya et al;* US 6671724 B1; Software, systems and methods for managing a distributed network

- *Pisello et al;* US 5495607 A; Network management system having virtual catalog overview of files distributively stored across network domain

- *Rao et al;* US 6070182 A; Data processor having integrated boolean and adder logic for accelerating storage and networking applications

- *Rogers et al;* US 6094655 A; Method of creating and using notes decision capsules

- *Rogers et al;* US 5752246 A; Service agent for fulfilling requests of a web browser

- *Scandura;* US 6275976 B1; Automated method for building and maintaining software including methods for verifying that systems are internally consistent and correct relative to their specifications

- *Schott et al;* US 20030033266 A1; Apparatus and method for problem solving using intelligent agents

- *Stoyen;* US 6360193 B1; Method and system for intelligent agent decision making for tactical aerial warfare

- *Suarez;* US 5790789 A; Method and architecture for the creation, control and deployment of services within a distributed computer environment

- *Taylor et al;* US 6292830 B1; System for optimizing interaction among agents acting on multiple levels

- *Turek et al;* US 6460070 B1; Mobile agents for fault diagnosis and correction in a distributed computer environment

- *Yalowitz et al;* US 6212649 B1; System and method for providing highly-reliable coordination of intelligent agents in a distributed computing system

- *Zachary et al;* US 6427142 B1; Intelligent agent workbench

- *Bowman-Amuah;* US 6742015 B1; Base services patterns in a netcentric environment

- *Bowman-Amuah;* US 6370573 B1; System, method and article of manufacture for managing an environment of a development architecture framework

- *Bowman-Amuah;* US 6324647 B1; System, method and article of manufacture for security management in a development architecture framework

- *Bowman-Amuah;* US 6256773 B1; System, method and article of manufacture for configuration management in a development architecture framework

- *Coleman;* US 20040024656 A1; Interactive product selector with inferential logic engine

- *Nakisa et al;* US 6741975 B1; Rule based expert system for consumer preference

- *Aldridge et al;* US 6922684 B1; Analytical-decision support system for improving management of quality and cost of a product

- *Battas et al;* US 6757689 B2; Enabling a zero latency enterprise

- *HONDA;* JP 11157214 A; METHOD FOR FORMING EMBOSSED IMAGE AND CARD WITH EMBOSSED IMAGE

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- *Bigus et al*; Constructing Intelligent Agents Using Java: Professional Developer's Guide, 2nd Edition; March 2001; pp 1-19

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- *Biron et al*; IDEAL: A multi-agent architecture for the management of complex networks; IEEE International Conference on Communications Technical Program Conference Record; Vol. 3; 23-26 May 1993; pp 1875-1879

- *Blake*; Rule-driven coordination agents: a self-configurable agent architecture for distributed control; 5th International Symposium on Autonomous Decentralized Systems Proceedings; 26-28 March 2001; pp 271-277

- *Garcia et al*; A decentralised and extensible system of Java concurrent objects to monitor and control TCP/IP networks; IEEE International Conference on Communications; Vol. 1; 18-22 June 2000; pp 175-180

- *Gerkey et al*; Murdoch: publish/subscribe task allocation for heterogeneous agents ; Proceedings of the fourth international conference on Autonomous agents; June 2000; pp 203-204

- *Huang et al*; A constructing scheme for autonomous distributed control systems with multi-agent society; Third International Symposium on Autonomous Decentralized Systems Proceedings; 9-11 April 1997; pp 17-24

- *Junpu et al*; An architecture of agent-based intelligent control systems; Proceedings of the 3rd World Congress on Intelligent Control and Automation; Vol. 1; 28 June-2 July 2000; pp 404-407

- *Kim et al*; Implementation of a distributed problem solving framework based on discrete event system specification; IEEE International Conference on Systems, Man and Cybernetics; Intelligent Systems for the 21st Century; Vol. 5; 22-25 Oct. 1995; pp 4178-4183

- *Seo et al*; A fuzzy reinforcement function for the intelligent agent to process vague goals; 19th International Conference of the North American Fuzzy Information Processing Society; 13-15 July 2000; pp 29-33

- *Yen*; Fuzzy logic and intelligent agents; IEEE International Fuzzy Systems Conference Proceedings; Vol. 1; 22-25 Aug. 1999; pp 342-343

- *Tomita et al*; A cooperative protection system with an agent model; IEEE Transactions on Power Delivery; Vol. 13, Is. 4; Oct. 1998; pp 1060-1066

- *Sapaty et al*; WAVE: mobile intelligence in open networks; First Annual Conference on Emerging Technologies and Applications in Communications Proceedings; 7-10 May 1996; pp 192-195

- *Somers*; Hybrid: unifying centralised and distributed network management using intelligent agents; IEEE Network Operations and Management Symposium; vol. 1; 15-19 April 1996; pp 34-43

- *Gou et al*; Agent-based virtual enterprise modeling and operation control; IEEE International Conference on Systems, Man, and Cybernetics; Vol. 3; 7-10 Oct. 2001; pp 2058-2063

- *Vincent et al*; Implementing soft real-time agent control'; Proceedings of the fifth international conference on Autonomous agents; May 2001; pp 355-362

- *Liu et al*; Intelligent service creation environment for IN; International Conference on Communication Technology Proceedings; Vol. 2; 21-25 Aug. 2000; pp 1098-1101

- *Marcus*; Improving reliability of intelligent agents for network management; Proceedings of the Sixth IFIP/IEEE International Symposium on Integrated Network Management; Distributed Management for the Networked Millennium; 24-28 May 1999; pp 941-942

- *Yu et al*; Evolving intelligent text-based agents; June 2000; Proceedings of the fourth international conference on Autonomous agents; pp 388-395

Any inquiry concerning this communication or earlier communications from the Office should be directed to Meltin Bell whose telephone number is 571-272-3680. This Examiner can normally be reached on Mon - Fri 7:30 am - 4:00 pm.

If attempts to reach this Examiner by telephone are unsuccessful, his supervisor, David Vincent, can be reached on 571-272-3080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

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MB
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DAVID VINCENT
SUPERVISORY PATENT EXAMINER